

WCN Opto Group Co., Limited**Customer Name:****Date:****2017-10-10****Part No:****WCN3S-1056SR-A1****Product Group
Description:****LED Display****Customer Part No:****Approval Date:****Customer
Confirmation****Approved by****Checked by****Athena
2017-10-10****Prepared By****Fei
2017-10-10****Country of Origin: China****WCN Opto Group Co., Limited****5th Floor,Block A-2,Xuxingda Ind Zone
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REVISION RECORD

MARKER	Matter for revision	SHEET	DTAE	MAKE R	APPOVED SIGN	
	Reason for revision					
A0	P# WCN3S-1056SR-A1 -----	Whole Spec	2017-07 -15	Fei	Athena	
A1	New Version issued -----	Whole Spec	2017-10 -10	Fei	Athena	

1. Type No./Manufacture's Name

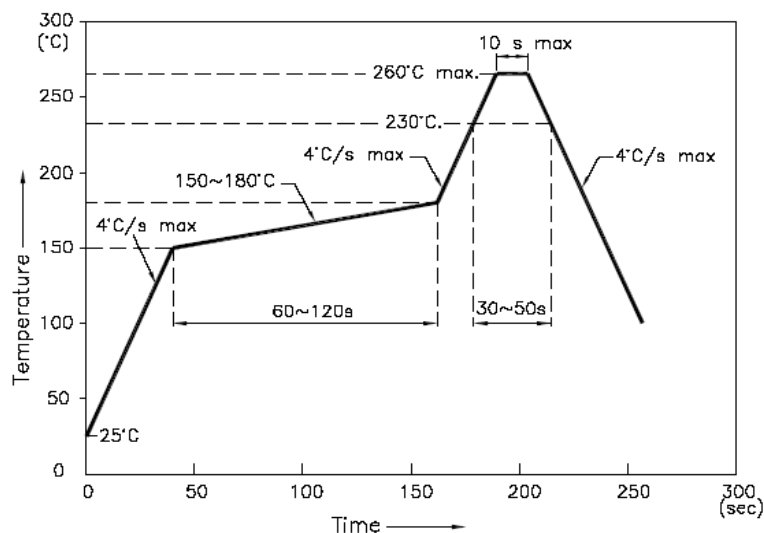
WCN3S-1056SR-A1 / WCN Opto Group Co., Limited.

2. Features:

- High Reliability
- Low Power Requirement
- Easy Assembly

3. Faction: Display Digit Characteristic**4. Soldering Conditions: Soldering Temp. 260 ± 5 °C, Soldering Time. 3~5 sec.**

Soldering Power <30 W.

5. Re-flow Temp/Time**NOTES:**

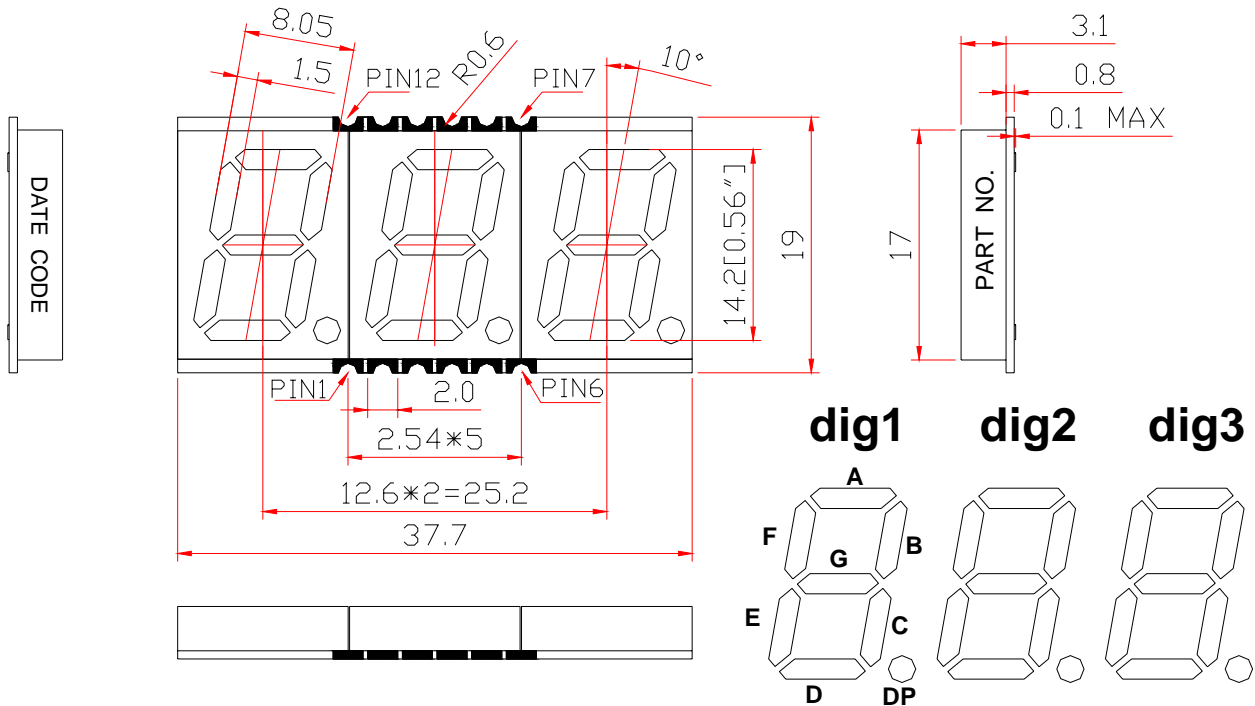
5.1. We recommend the re-flow temperature $245^{\circ}\text{C}(\pm 5^{\circ}\text{C})$. the maximum soldering temperature should be limited to 260°C .

5.2. Don't cause stress to the epoxy resin while it is exposed to high temperature. Number of re-flow process shall be 2 times or less.

6. Description:

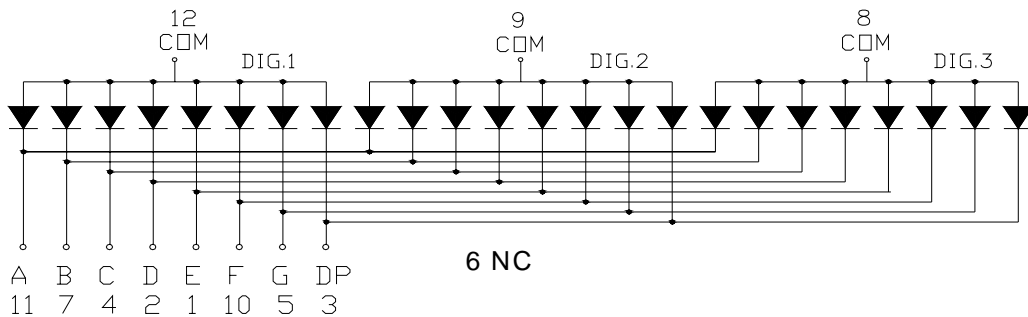
- Three Digit LED Display
- Digit Height: 14.2mm(0.56")
- Gray Face and Milky Segment
- Color: Red

Outer Dimension:



Notes: Unless otherwise stated, the tolerance is $\pm 0.25\text{mm}$.

Circuit Diagram:



Pin Connection:

PIN NO.	CONNECTION	PIN NO.	CONNECTION
1	Cathode E	7	Cathode B
2	Cathode D	8	Common Anode Dig.3
3	Cathode DP	9	Common Anode Dig.2
4	Cathode C	10	Cathode F
5	Cathode DP	11	Cathode A
6	NC	12	Common Anode Dig.1

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■ ABSOLUTE MAXIMUM RATINGS AT TA=25°C

Parameter	Symbol	Condition	Color	Rating	Units
Power Dissipation Per Segment	P _d	—	Red	65	mW
Forward Current Per Segment	I _F	—	Red	25	mA
Peak Forward Current Per Segment	I _{FP}	1/10 Duty 1KHz	Red	100	mA
Reverse Voltage Per Segment	V _R	—	Red	5	V
Operating Temperature Range	T _{opr}	—	—	-40~+105	°C
Storage Temperature Range	T _{stg}	—	—	-40~+105	°C

■ Electrical/Optical Characteristics Rating(Ta=25°C)

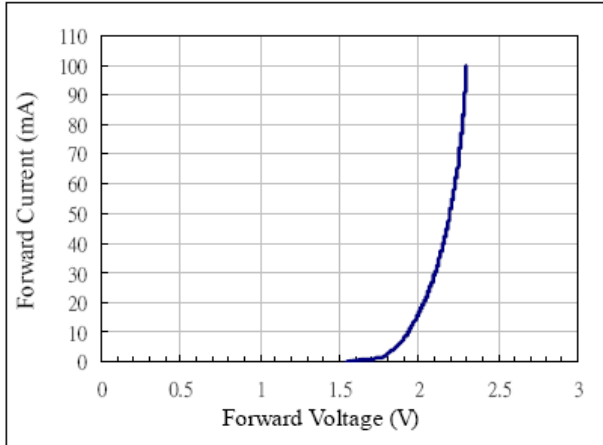
Item	Symbol	Test conditions	Location	Rating			Units
				Min.	Typ.	Max.	
Forward Voltage	V _F	I _F =20mA	Per Chip	1.8	2.0	2.6	V
Reverse Current	I _R	V _R =5V	Per Chip	—	—	100	μA
Luminous Intensity	I _v	I _F =10mA	Per Chip	7201	11500	18000	ucd
Wave Length	λ _P	I _F =20mA	Per Chip	—	635	—	nm
	λ _D			—	630	—	
Spectral Line Half Width	Δλ	I _F =20mA	Per Segment	—	20		nm
Luminous Intensity Matching Ratio (Segment To Segment)	I _{v-m}	I _F =10mA				1.2:1	

■ Luminous Intensity Sorting: (Luminous intensity tolerance :+/-10%)

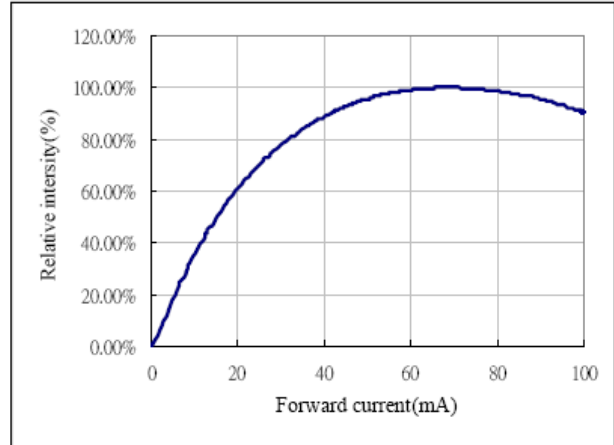
Rank	Symbol	Condition	Min	Max	Unit
O	O	I _F =10mA	7201	8500	ucd
P	P	I _F =10mA	8501	10500	ucd
Q	Q	I _F =10mA	10501	12800	ucd
R	R	I _F =10mA	12801	15250	ucd
S	S	I _F =10mA	15251	18000	ucd

■ Typical Optical-Electronic Characteristic Curves

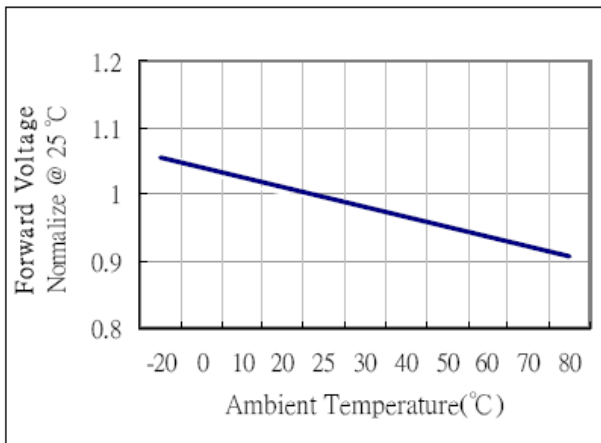
Forward current vs. Forward voltage



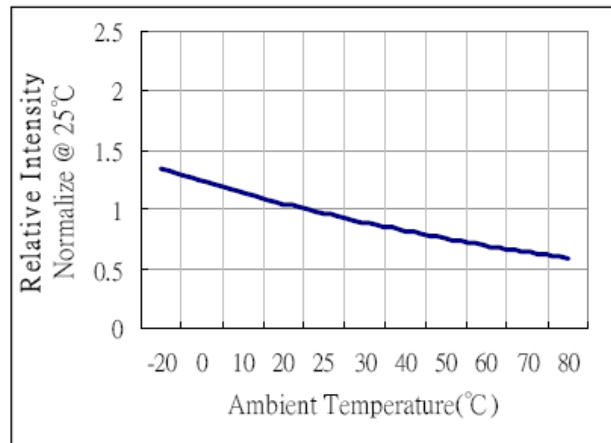
Relative intensity vs. Forward current



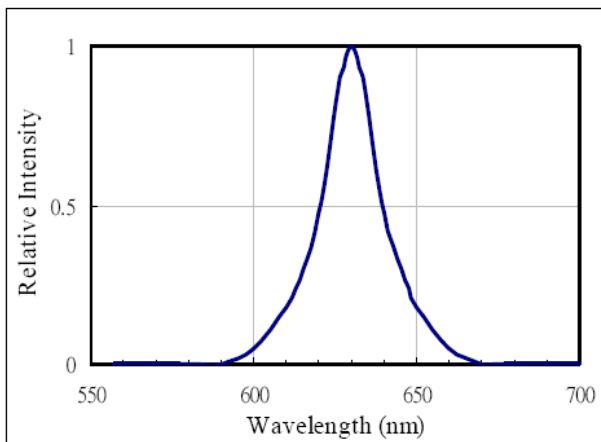
Forward voltage vs. Temperature



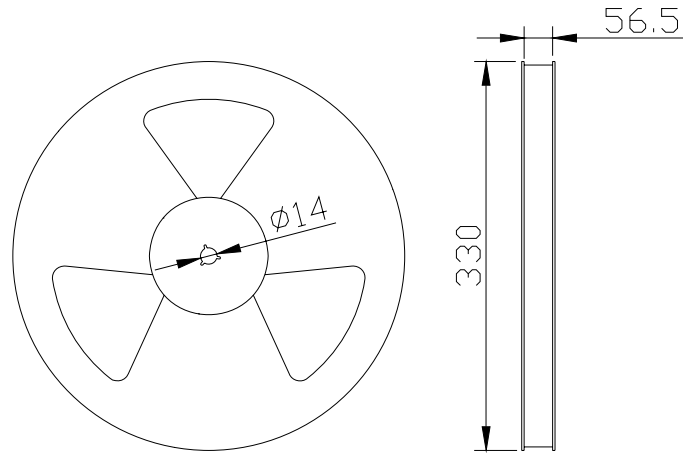
Relative intensity vs. Temperature



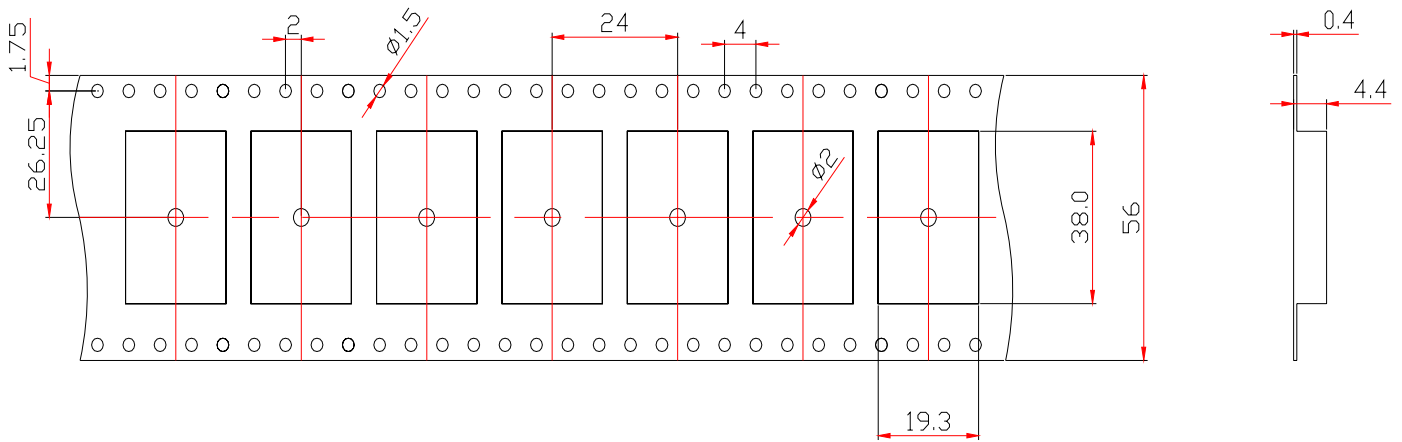
Relative intensity vs. Wavelength



■ Packing Reel Dimensions(mm):

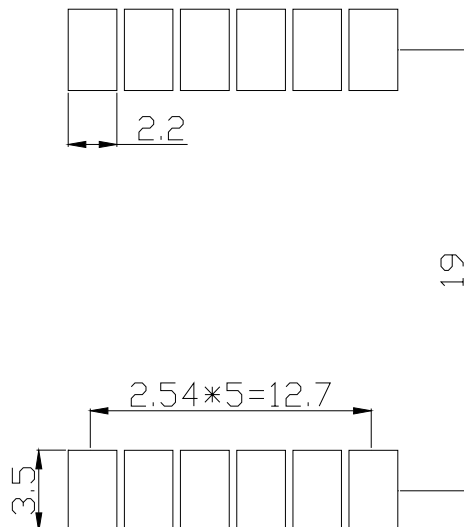


■ Dimensions of Tape (Unit: mm)



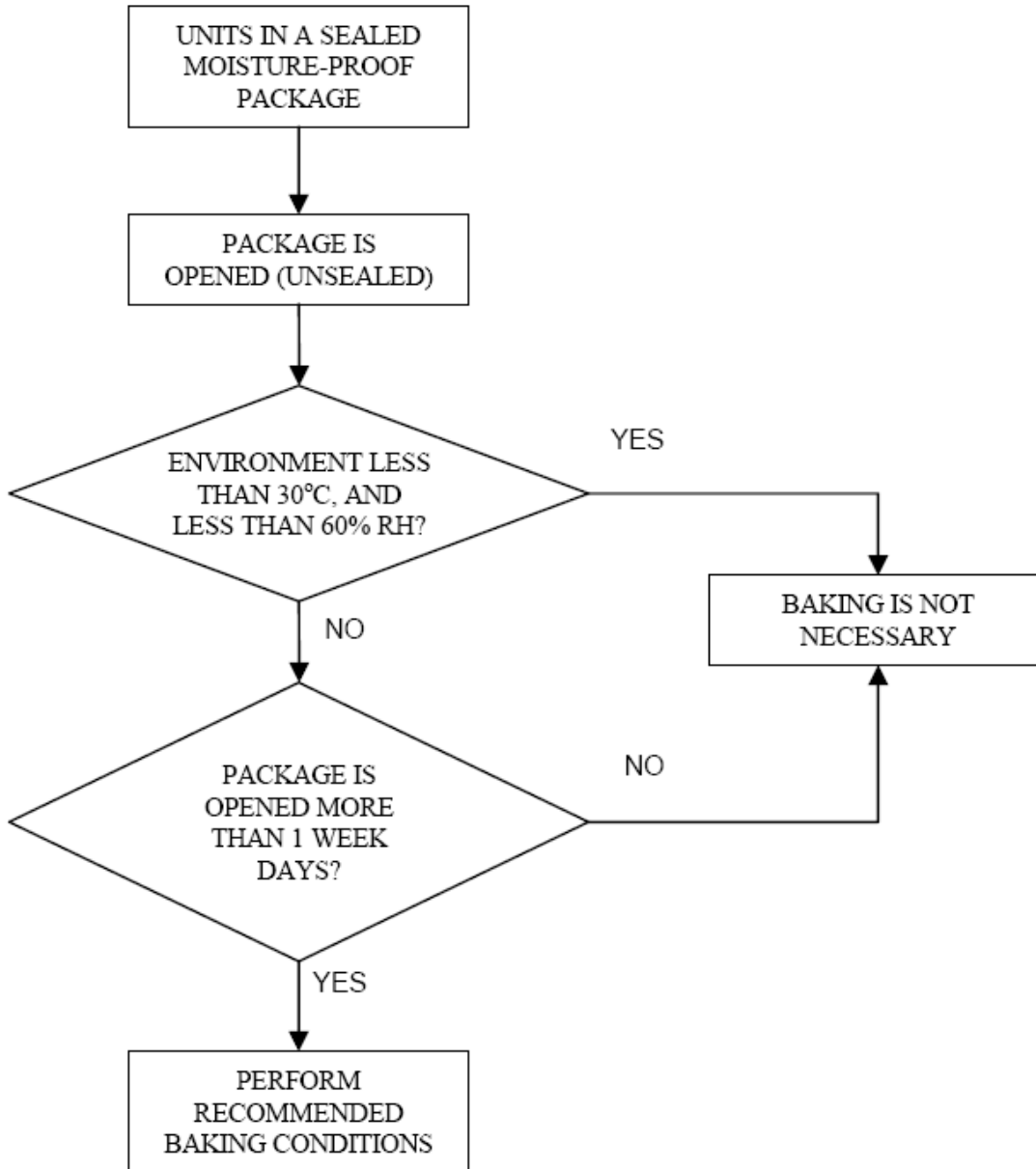
■ One Reel contained 600 PCS products:

■ Recommended Soldering Pattern:



Moisture Proof Packaging:

All N/D SMD displays are shipped in moisture proof package. The displays should be stored at 30°C or less and 60% RH or less. Once the package opened, moisture absorption begins.



Baking Conditions:

If the parts not stored in dry conditions, they must be baked before re-flow to prevent damage to the parts.

Package	Temperature	Time
In Reel	60 °C	≥ 48hours
In Bulk	100 °C	≥ 4hours
	125 °C	≥ 2hours

■ Baking should only be done once.